From: Stuble, Bill
To: Rick Lingo; Morris, Cliff; Branson, Eric; Wallendorff, Mel; Carter, Therm; Slaybaugh, Kip; Hodgson, Rich; Potter, Dolly; Hansen, Jack; Ganskop, Mike; Vandendoren, Alain; Christensen, Jan; Rcron@detroitstoker.com; tloviska@detroitstoker.com; Bob Custer
Subject: MEETING NOTES Coal Calciner Conference Call with R. Lingo
Date: Friday, January 05, 2007 3:18:40 PM

Notes in BLUE *Attendees: DAP TAB ECB KRS WES Solvay*

R. Lingo T. Loviska D. Cron B. Custer Detroit Stoker

From: Stuble, Bill

Sent: Thursday, January 04, 2007 3:00 PM

To: 'Rick Lingo'; Morris, Cliff; Branson, Eric; Wallendorff, Mel; Carter, Therm; Slaybaugh, Kip; Hodgson, Rich; Potter, Dolly; Hansen, Jack; Ganskop, Mike; Vandendoren, Alain; Christensen, Jan

Subject: Coal Calciner Conference Call with R. Lingo

When: Friday, January 05, 2007 1:30 PM-2:30 PM (GMT-07:00) Mountain Time (US & Canada).

Where: Engineering Conference Room

AGENDA

1 Run a test substituting straight paddles on one row of the side feeders, replacing the ones that lean towards the wall, where sidewall slagging is a problem (we will need a price quotate and procedure); DS will make a proposal and provide instructions to change one or possibly two side feeders. If two, no new parts will be required (just swap the paddles). They may will make a trial run on the test feeder in their lab. They want avoid a blank spot along the wall. Although, besides two rows straight paddles, one option may be all four paddles tipped to the center of the furnace.

2 Design movable, perforated baffle on the south side of UF duct under FU-1, to balance undergrate pressure in that furnace; A perforated, movable damper plate will be designed to go in the underfire duct, ahead of the FGR injection. Stuble two send UF duct drawing to DS. This air imbalance is a serious problem that may be causing higher temperature, NOx, and furnace roof slagging.

3 Plug sidewall tuyeres where sidewall slagging is major (This test is in progress on FU-1 -- will review results); Kip noticed some improvement in FU-1 sidewall slagging since the middle area sidewall tuyeres were plugged on 12/19. These may need re-opening if the side feeders are modified, as above. In that case, FU-2 may be the better test unit for side feeder paddle change.

4 Make revisions to replace 90 deg ash elbows with 45 deg elbows, where possible; Two adjacent 90's are definitely a restriction. These are sometimes

used to reduce velocity and wear. But, in our case, with large pieces of hard clinker and

the problems we are having, two 45's are advised. Stuble to send photo, drawings, for review by DS. Loviska also recommends hard facing all of the ash grinder teeth (rotating and stationary), and he also recommended shimming out the plate that holds the stationary teeth.

5 Reduce water injection / improve water injection control (due to having a problem with water in the ash); Kip clarified ..flow meters may have been wrongly accused of the water over flow problem. They will be given another chance. Dave Cron said the wider spray - fire moved away from the back wall - higher flow may have been the cause. Return to the original, narrow angle spray is contemplated. It was agreed that water injection helps reduce furnace temperature, slag, and NOx.

6 Revise startup procedure to keep SNCR and water injection off until furnace reaches 1700F and EP outlet 300F (to minimize EP problems). DS recommends this, and interlocks to stop flows on the way down, also.

7 Review stack test results. Final report not yet received. NOx passed however. NH3 slip was high (above Fuel Tech warranty).